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SICKNESS AMONG SCHOOL CHILDREN



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TREASURY DEPARTMENT  
UNITED STATES PUBLIC HEALTH SERVICE  
HUGH S. CUMMING, SURGEON GENERAL

# SICKNESS AMONG SCHOOL CHILDREN

LOSS OF TIME FROM SCHOOL AMONG  
6,130 SCHOOL CHILDREN IN 13  
LOCALITIES IN MISSOURI

BY

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## SICKNESS AMONG SCHOOL CHILDREN.

### Loss of Time From School Among 6,130 School Children in 13 Localities in Missouri.<sup>1</sup>

By SELWYN D. COLLINS, Assistant Statistician, United States Public Health Service.

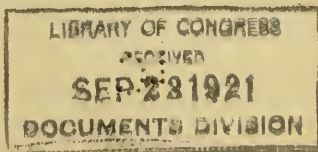
At the present stage of our knowledge of disease problems, any records which show the true incidence of even a few diseases in an observed population are important. Ordinary morbidity reports as furnished by physicians to local health departments do not, for well-known reasons, give an accurate picture of the incidence of any disease in a definitely enumerated population group. It is necessary, therefore, to utilize other methods for obtaining the desired information.

In a general way, the most promising directions for seeking data of this character are: (1) Records of disability among groups of insured persons associated in various kinds of sick-benefit associations; (2) records of sickness in groups of persons employed in industrial establishments where careful medical supervision and a system of disability records have been established; (3) records of sickness in groups of individuals living in institutions or attending school; and (4) special surveys of population groups made for the specific purpose of ascertaining the incidence of a given disease or group of diseases.

In various prior publications the Public Health Service has presented statistics of disability among adult wage earners who are members of sick-benefit associations, and the results of special sickness surveys. In the hope of obtaining data regarding the incidence of diseases among children, an attempt was made in connection with the field studies in child hygiene in Missouri during 1919-20, to institute a system of sickness records in connection with the schools. This was undertaken purely as an experiment, and a limited number of schools were requested to cooperate with the Public Health Service for this purpose. The results are presented in the following pages. The work is being undertaken on a larger scale, not only in Missouri but in other States for the school session of 1921-22.

The data here presented were collected in 13 localities in the State of Missouri. These data were entered by the teachers on cards dis-

<sup>1</sup> From Field Investigations in Child Hygiene, United States Public Health Service. The statistical part of this study was conducted in the Statistical Office of the Public Health Service. Reprint from the Public Health Reports, vol. 36, No. 27, July 8, 1921, pp. 1549-1559.



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tributed by medical officers of the Public Health Service in charge of child hygiene studies in the several communities. A card was made out for each child, showing sex, color, and age, and record, by school months, of the total possible number of days of school attendance,<sup>1</sup> the days present, the days absent on account of sickness, and the days absent from causes other than sickness. The card also contained a record of the diseases the child had during each month of the session.

After the cards had been completed and collected, they were carefully edited for errors, and only those which seemed to be properly and accurately used were included in the tabulation. It is believed that the necessary selection of properly filled out cards did not eliminate a disproportionate number of any particular class, such as those showing an excessive amount of absence or attendance.

The records, even after careful editing, however, can be considered only as a preliminary experiment. The data were incomplete in many ways. Records showing the specific data desired on the card were kept only after the first of the year 1920, and in some localities they were begun even later. Data for the months prior to the beginning of any special records were taken from the regular school records and, therefore, vary in completeness in the different localities. The entries showing the specific diseases causing the absence were not complete; in the majority of cases the number of days absent because of sickness was shown without specifying the disease. It was therefore decided to compute only the percentages of the total possible days of school attendance which were lost on account of sickness of all kinds and of causes other than sickness, with certain other data based on those cards reporting the specific disease causing the absence.

Table I shows the size and location of the cities from which data were drawn. They range from one to twenty thousand in population, and are fairly representative, average-sized cities of the State. No data from the larger cities were included.

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<sup>1</sup> It was found that, according to the prevailing custom in keeping school records of enrollment, a child's name was dropped from the roll after three days' absence and reentered when he returned. In tabulating the records for the purpose of counting the absence from school on account of sickness, a child's name was not dropped from the roll except when he was permanently separated from the school, as in the case of a child who left the community, or who went to work, or some similar case. With this difference, the total possible number of days of school attendance is the total number of days enrolled during the period used for the computation.

TABLE I.—*Population and location of certain cities in Missouri and the number of children for whom sickness records were obtained in each place.*

City.	County.	Population of city, 1920.	Number of children included.
Sedalia.....	Pettis.....	21,144	1,367
Jefferson City.....	Cole.....	14,490	660
Independence.....	Jackson.....	11,686	999
Cape Girardeau.....	Cape Girardeau.....	10,252	230
Warrensburg.....	Johnson.....	4,811	446
Excelsior Springs.....	Clay.....	4,165	302
Bonne Terre.....	St. Francis.....	3,815	641
West Plains.....	Howell.....	3,178	436
Liberty.....	Clay.....	3,097	351
Farmington.....	St. Francis.....	2,685	421
Jackson.....	Cape Girardeau.....	2,114	154
Montgomery.....	Montgomery.....	1,688	16
Oregon.....	Holt.....	904	137

Table II, computed from the basic data shown in Table VII (see appended tables), shows by months the percentages of the total possible number of days of school attendance which were lost on account of sickness and of causes other than sickness. The data are shown by sex and for two age groups.

TABLE II.—*Percentages of total possible number of days of school attendance which were lost on account of sickness and of causes other than sickness for each month of the school year 1919-20, in certain localities in Missouri.*

Cause of absence, sex, and age group.	Total school year.	1919				1920				
		Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Janu-ary.	Febru-ary.	March.	April.	May.
Sickness:										
Both sexes—										
All ages (6 to 18).....	5.6	1.3	2.5	4.2	5.5	6.3	11.6	6.9	5.8	3.6
6 to 10.....	6.9	1.3	3.0	5.4	6.7	7.5	13.9	8.9	7.6	4.7
11 to 18.....	4.1	1.3	2.0	2.9	4.2	4.9	9.0	4.7	4.0	2.4
Boys—										
All ages (6 to 18).....	5.4	1.2	2.3	4.0	4.8	6.1	11.9	6.6	5.8	3.2
6 to 10.....	6.7	1.2	2.7	5.0	5.7	7.4	14.0	8.7	7.5	4.1
11 to 18.....	3.9	1.2	2.0	3.0	3.8	4.5	9.5	4.3	3.8	2.3
Girls—										
All ages (6 to 18).....	5.8	1.4	2.7	4.4	6.2	6.6	11.4	7.2	5.9	4.0
6 to 10.....	7.2	1.4	3.3	5.8	7.6	7.7	13.8	9.1	7.7	5.3
11 to 18.....	4.2	1.4	1.9	2.9	4.6	5.3	8.6	5.1	4.1	2.6
Other causes:										
Both sexes—										
All ages (6 to 18).....	3.0	2.0	2.5	2.6	3.3	3.1	4.0	3.2	2.9	2.7
6 to 10.....	2.9	2.2	2.8	2.6	3.4	3.3	3.9	2.8	2.5	2.6
11 to 18.....	3.1	1.9	2.2	2.6	3.2	3.0	4.1	3.6	3.3	2.8
Boys—										
All ages (6 to 18).....	3.2	2.2	2.8	2.6	3.7	3.4	4.4	3.5	3.1	3.1
6 to 10.....	3.1	2.2	3.2	2.7	3.8	3.6	4.3	3.0	2.6	2.8
11 to 18.....	3.4	2.2	2.3	2.6	3.6	3.1	4.6	4.0	3.8	3.4
Girls—										
All ages (6 to 18).....	2.7	1.9	2.2	2.5	2.9	2.9	3.6	2.9	2.6	2.3
6 to 10.....	2.6	2.2	2.3	2.5	3.0	3.0	3.5	2.6	2.4	2.3
11 to 18.....	2.7	1.5	2.1	2.5	2.8	2.9	3.7	3.3	2.8	2.2

As between the sexes, absence on account of sickness is, with some exceptions, greater for girls than for boys. The differences, however, are so small that they can hardly be considered significant. The

absence from causes other than sickness is greater for boys than for girls in practically all cases. Although the differences are not great, they persist in all months and therefore seem to indicate that causes other than sickness were responsible for a greater amount of absenteeism among boys than among girls.

From the point of view of age, the younger group seems to lose more time because of sickness than the older group. The percentages of total possible days of attendance which were lost on account

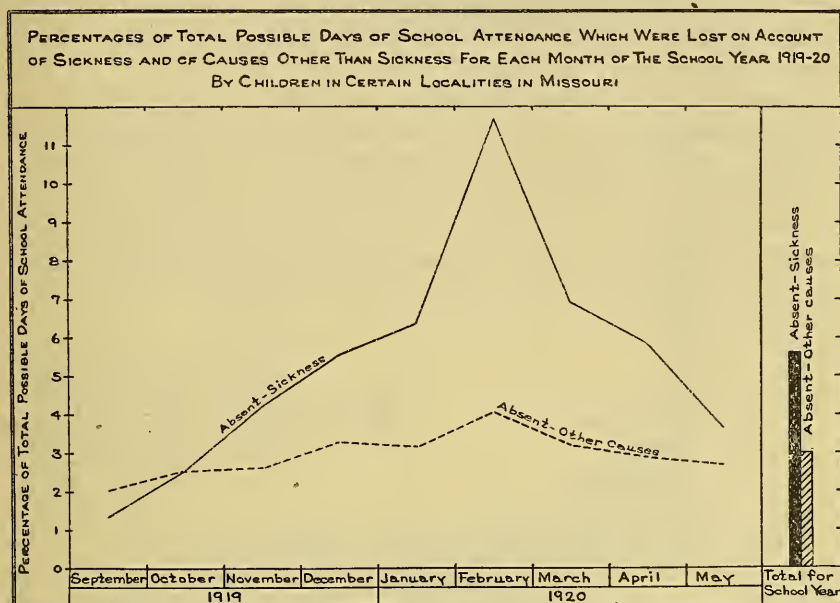


Fig. 1.

of sickness is greater for the younger group in practically all cases. The differences are large enough to be significant and suggest one of three things: that a larger number of cases of sickness occurred among the younger children, or that they recovered more slowly, or that they were kept at home for less serious illness or for a longer time after recovery than was the case with the older children. Unfortunately, the data available for this study were not in such a shape that the question could be settled as to which was actually the case.

Absence from causes other than sickness seems to differ less for the two age groups than absence from sickness. For the year as a whole, the children of the older group were absent slightly more from causes other than sickness than were those of the younger group. As to the seasonal distribution of such absence, the younger group seems to have more absence in the first half of the year, but less in the last half. However, the differences are too slight to be significant; but since the tendency is so general and applies to all groups, it is worth noting.



Figure I shows, for both sexes and all ages, the percentages of time lost from school because of sickness and of causes other than sickness for each month of the school year.

The unusually high peak in February, 1920, is obviously due to the influenza epidemic. Of the days lost on account of sickness from known diseases in that month, 46 per cent were due to influenza, and 34 per cent of the cases of illness of known cause were due to influenza. Reference to Table IV will show that the percentages of days lost and of cases of influenza were not large except in January and February; the curve, therefore, approximates sickness in a normal year except for those months.

In view of the consistently greater time lost on account of sickness by the younger of the two age groups, Table III was prepared to show the time lost on account of sickness and of causes other than sickness for children of each year of age from 6 to 16 years, inclusive, for the school session. The data are presented graphically in Figure 2.

TABLE III.—*Time lost from school on account of sickness and of other causes, by children each year of age from 6 to 16 years, inclusive, during the school year 1919-20, in certain localities in Missouri.*

Age in years.	Number of children.	Total possible number of days of school attendance.	Percentage of total possible days of school attendance lost on account of sickness.	Percentage of total possible days of school attendance lost on account of other causes.
All ages (6 to 16) .....	6, 099	666, 449	5.6	3.0
6.....	404	49, 480	9.7	3.8
7.....	627	65, 157	8.6	3.0
8.....	651	67, 605	6.7	2.8
9.....	745	84, 764	6.1	2.5
10.....	741	83, 627	4.9	2.6
11.....	754	84, 982	4.0	2.3
12.....	731	80, 083	4.2	3.1
13.....	618	62, 246	4.0	3.0
14.....	475	51, 040	3.6	2.9
15.....	261	26, 425	4.9	3.9
16.....	92	9, 040	3.9	3.3

The time lost from sickness shows no great variations nor any consistent trend from 11 to 16 years of age, but decreases considerably and consistently from 6 to 11 years. Absence from causes other than sickness shows no marked differences for the different ages. If any trend whatever is shown, it indicates increasing absence for the older children, but the items are irregular and the increasing trend is slight only.

The specific diseases causing absence were reported in 2,326 cases, resulting in 14,373 days' absence from school (see appended Tables VIII and IX). On the basis of these known cases, certain computations were made as to the relative importance of certain diseases as a cause of absence in each month of the school year. Because of the fact that the influenza epidemic made certain



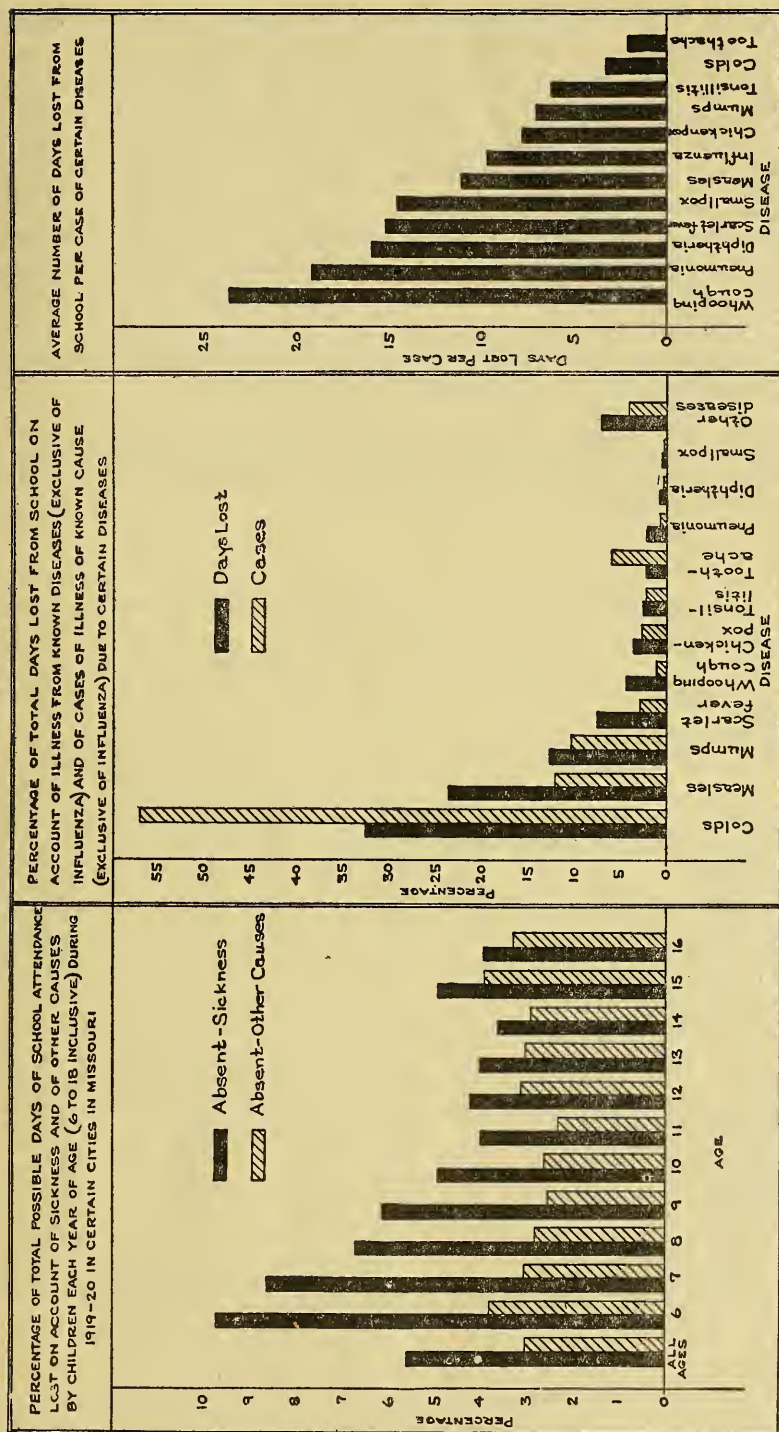


Fig. 2-

Fig. 3-

Fig. 4-

months of this school year exceptional, the cases of and the absences due to influenza were deducted from this total number, and the proportion of cases of and of days lost from all diseases, exclusive of influenza, were computed for each disease for each month of the school year. For example, absence because of sickness of known cause in March was 2,528 days; but of this total, 223 days were due to influenza, leaving 2,305 days due to other known diseases. Of this total absence from known diseases, 543 days, or 23.6 per cent, were due to measles. Similar percentages were worked for other diseases and for each month to show the relative importance of certain diseases in causing absence from school at different seasons of the year after eliminating the abnormal condition resulting from influenza. Table IV shows the results of these computations.

TABLE IV.—Percentages of total number of days lost from school on account of all illness of known cause (exclusive of influenza), and percentages of total cases of illness of known cause (exclusive of influenza) due to certain diseases, among children 6 to 18 years of age, in certain localities in Missouri during 1919-20.

Disease.	Total school year	1919				1920				
		Sep-tem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Jan-uary.	Febru-ary.	March.	April.	May.

PERCENTAGE DUE TO EACH DISEASE.

Days lost:										
All diseases (exclusive of influenza).....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Colds.....	32.5	47.1	41.3	34.1	50.8	52.3	33.0	33.1	16.7	15.6
Measles.....	23.5				.8	.4	16.0	23.6	54.7	48.1
Mumps.....	12.8		1.4	1.4	2.6	16.2	11.6	19.7	15.3	13.6
Scarlet fever.....	7.5	14.3	30.1	29.4	19.7	7.4	5.9	2.7	.7	.7
Whooping cough.....	4.4		5.9	7.8	7.7	4.4	5.4	3.6	.5	6.6
Chicken pox.....	3.6		2.3	9.7	3.2	2.7	6.9	4.5	.7	
Tonsillitis.....	2.6		1.0	3.5	2.8	2.3	3.1	2.2	2.5	2.8
Pneumonia.....	2.3		1.4	1.3		5.1	5.0	1.9	1.1	
Toothache.....	2.3	2.1	3.0	3.3	1.8	2.2	3.0	1.8	2.2	2.1
Diphtheria.....	.8			2.0	3.4		.9		.7	.5
Smallpox.....	.5						.7	.9	.2	1.4
Other diseases.....	7.2	36.5	13.6	7.5	7.2	7.0	8.5	6.0	4.7	8.6
Cases:										
All diseases (exclusive of influenza).....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Colds.....	57.0	71.2	70.1	61.0	75.3	72.6	56.1	56.9	36.6	41.0
Measles.....	12.1				.5	.3	8.7	11.5	23.1	27.7
Mumps.....	10.3		1.3	1.6	3.0	10.7	10.1	13.8	13.5	15.1
Scarlet fever.....	2.8	6.5	9.1	13.0	7.1	2.2	2.5	.7	.3	
Whooping cough.....	1.1		2.6	1.6	.5	.9	1.7	.7	.3	2.4
Chicken pox.....	2.7		1.3	6.5	2.5	1.9	4.8	3.5	.8	
Tonsillitis.....	2.1		1.3	2.4	1.5	2.2	3.1	2.8	2.2	2.4
Pneumonia.....	.7		1.3			1.9	.8		1.1	
Toothache.....	6.1	3.2	9.1	9.0	4.6	3.8	6.2	5.4	7.8	7.2
Diphtheria.....	.3			.8	1.0		.3		.3	.6
Smallpox.....	.2						.6	.2		.6
Other diseases.....	4.3	16.1	3.9	4.1	4.0	3.5	5.1	4.5	4.0	3.0

PERCENTAGE OF TOTAL DAYS LOST FROM ILLNESS OF KNOWN CAUSE AND OF TOTAL CASES OF ILLNESS OF KNOWN CAUSE DUE TO INFLUENZA

Days lost:										
Influenza.....	17.7	3.5		2.1	4.6	18.1	46.3	8.8	2.8	
Cases:										
Influenza.....	11.2	3.1		1.6	3.9	12.2	33.9	3.5	1.9	

It is a striking fact that colds were the greatest single assigned cause of absence in every month of the school year. The other infectious diseases are more or less seasonal in character; measles was an important cause of absence from February to May, scarlet fever from September to December. Seasonal variation was not such an outstanding fact in the other cases, but existed for most of the common infectious diseases.

Children are more disposed to some diseases at certain ages, and therefore the relative importance of those diseases as causes of absence from school varies with age. In order to show this variation, Tables V and VI were prepared, showing by age groups the percentages of the total number of days lost from sickness of known cause which were due to certain diseases. Similar computations were made for the percentages of cases and the days lost per case of these diseases.

TABLE V.—*Percentage of days lost from diseases of known cause and of cases of illness of known cause due to certain diseases among children in certain localities in Missouri, by age groups.*

Disease.	Days lost.			Cases.		
	All ages (6 to 18).	6 to 10 years of age.	11 to 18 years of age.	All ages (6 to 18).	6 to 10 years of age.	11 to 18 years of age.

PERCENTAGE OF ALL ILLNESS FROM KNOWN CAUSE (EXCLUSIVE OF INFLUENZA)  
DUE TO CERTAIN DISEASES.

All diseases (exclusive of influenza).....	100.0	100.0	100.0	100.0	100.0	100.0
Colds.....	32.5	28.4	41.0	57.0	52.8	63.2
Measles.....	23.5	28.6	12.9	12.1	16.7	5.5
Mumps.....	12.8	12.0	14.5	10.3	10.9	9.5
Scarlet fever.....	7.5	8.2	6.0	2.8	3.2	2.3
Whooping cough.....	4.4	6.3	.3	1.1	1.7	.1
Chicken pox.....	3.6	4.2	2.5	2.7	3.5	1.4
Tonsillitis.....	2.6	1.4	5.0	2.4	1.3	4.0
Toothache.....	2.3	1.6	3.8	6.1	5.0	7.8
Pneumonia.....	2.3	2.2	2.4	.7	.7	.7
Diphtheria.....	.8	.5	1.4	.3	.2	.4
Smallpox.....	.5	.6	.4	.2	.2	.1
Other diseases.....	7.2	6.0	9.8	4.3	3.8	5.0

PERCENTAGE OF ALL ILLNESS FROM KNOWN CAUSE DUE TO INFLUENZA.

Influenza.....	17.7	16.0	21.0	11.2	10.5	12.2
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TABLE VI.—Average number of days lost from school per case of certain diseases among children in certain localities in Missouri, by age groups.

Disease.	All ages (6 to 18).	6 to 10 years of age.	11 to 18 years of age.
All diseases.....	6.2	6.9	5.1
Whooping cough.....	23.5	24.1	9.5
Pneumonia.....	19.2	22.1	15.3
Diphtheria.....	15.9	14.0	17.8
Scarlet fever.....	15.1	16.5	12.2
Smallpox.....	14.5	14.3	15.0
Measles.....	11.1	11.2	10.7
Influenza.....	9.7	10.5	8.8
Chicken pox.....	7.8	7.7	7.8
Mumps.....	7.1	7.1	7.1
Tonsillitis.....	6.2	7.1	5.8
Colds.....	3.3	3.5	3.0
Toothache.....	2.2	2.1	2.2
Other diseases.....	9.6	10.2	8.9

Figure 3 shows graphically the relative importance of these diseases as measured in days lost and in cases of illness among children of 6 to 18 years of age, inclusive. Figure 4 shows the severity of cases of various diseases as measured in the average time lost from school per case.

For the year as a whole, the children lost, on account of sickness, an average of 5.6 per cent of the days that school was in session. Assuming that this percentage of days of sickness is representative of the whole year, it means an average of slightly over 20 days of sickness per child per year. Boys were absent on account of sickness almost as much as girls, the difference being only 0.4 of 1 per cent, which, on an annual basis, would mean about 20 days of sickness for boys and about 21 for girls.

The data presented here are, of course, insufficient to afford conclusions of a general nature, but it is believed that they do suggest that the use of school records for obtaining facts as to disease incidence among children is practicable. Such facts, it is unnecessary to say, would be of great value, not only to those who are interested in epidemiology, but to school and health administrators.



TABLE VII.—*Number of children included in the study, total possible number of days of school attendance, and days absent on account of sickness and of causes other than sickness, by months, for the school year 1919-20, in certain localities in Missouri.*

Age and sex.		Total school year.	1919.				1920.				
			Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
All ages:											
Both sexes—											
Number of children....	6,130	2,701	2,793	2,856	2,920	3,340	3,608	5,348	5,494	4,377	
Total possible days of school attendance....	669,214	54,020	55,860	57,120	58,400	66,700	72,160	107,765	110,269	86,920	
Days absent—Sickness....	37,368	717	1,401	2,422	3,219	4,226	8,391	7,424	6,430	3,138	
Days absent—Other causes.....	19,802	1,099	1,402	1,470	1,915	2,094	2,902	3,438	3,162	2,320	
Boys—											
Number of children....	2,870	1,332	1,382	1,413	1,447	1,650	1,779	2,512	2,624	2,115	
Total possible days of school attendance....	325,150	26,640	27,640	28,260	28,940	33,000	35,550	50,601	52,633	41,856	
Days absent—Sickness....	17,442	326	646	1,138	1,396	2,000	4,228	3,333	3,029	1,346	
Days absent—Other causes.....	10,555	583	769	744	1,066	1,111	1,575	1,764	1,649	1,294	
Girls—											
Number of children....	3,260	1,369	1,411	1,443	1,473	1,690	1,829	2,836	2,870	2,262	
Total possible days of school attendance....	344,064	27,380	28,220	28,860	29,460	33,700	36,580	57,164	57,636	45,064	
Days absent—Sickness....	19,926	391	755	1,284	1,823	2,226	4,163	4,091	3,401	1,792	
Days absent—Other causes.....	9,247	516	633	726	849	983	1,327	1,674	1,513	1,026	
6 to 10 years:											
Both sexes—											
Number of children....	3,173	1,421	1,476	1,516	1,542	1,808	1,923	2,801	2,821	2,229	
Total possible days of school attendance....	351,313	28,420	29,520	30,320	30,840	36,160	38,460	56,244	56,496	44,853	
Days absent—Sickness....	24,413	376	884	1,634	2,059	2,724	5,347	4,991	4,290	2,108	
Days absent—Other causes.....	10,078	623	813	787	1,035	1,186	1,507	1,570	1,408	1,149	
Boys—											
Number of children....	1,497	692	720	743	753	885	946	1,322	1,375	1,091	
Total possible days of school attendance....	170,611	13,840	14,400	14,860	15,060	17,700	18,920	26,576	27,552	21,703	
Days absent—Sickness....	11,352	167	384	737	863	1,305	2,649	2,299	2,065	883	
Days absent—Other causes.....	5,200	303	460	400	567	638	814	800	706	612	
Girls—											
Number of children....	1,676	729	756	773	789	923	977	1,479	1,446	1,138	
Total possible days of school attendance....	180,702	14,580	15,120	15,460	15,780	18,460	19,540	29,668	28,944	23,150	
Days absent—Sickness....	13,061	209	500	897	1,196	1,420	2,698	2,692	2,224	1,225	
Days absent—Other causes.....	4,778	320	353	387	468	548	693	770	702	537	
11 to 18 years:											
Both sexes—											
Number of children....	2,957	1,280	1,317	1,340	1,378	1,532	1,685	2,547	2,673	2,148	
Total possible days of school attendance....	317,901	25,600	26,340	26,800	27,560	30,540	33,700	51,521	53,773	42,067	
Days absent—Sickness....	12,955	341	517	788	1,160	1,502	3,044	2,433	2,140	1,030	
Days absent—Other causes.....	9,724	476	589	683	880	908	1,395	1,868	1,754	1,171	
Boys—											
Number of children....	1,373	640	662	670	694	765	833	1,190	1,249	1,024	
Total possible days of school attendance....	154,539	12,800	13,240	13,400	13,880	15,300	16,660	24,025	25,081	20,153	
Days absent—Sickness....	6,090	159	262	401	533	695	1,579	1,034	964	463	
Days absent—Other causes.....	5,255	280	309	344	499	473	761	964	943	682	
Girls—											
Number of children....	1,584	640	655	670	684	767	852	1,357	1,424	1,124	
Total possible days of school attendance....	163,362	12,800	13,100	13,400	13,680	15,240	17,040	27,496	28,692	21,914	
Days absent—Sickness....	6,865	182	255	387	627	806	1,465	1,399	1,177	567	
Days absent—Other causes.....	4,469	196	280	339	381	435	634	904	811	489	

TABLE VIII.—*Number of days lost from school on account of sickness of known cause and number of cases of known diseases among school children 6 to 18 years of age, in certain localities in Missouri during 1919-20.*<sup>1</sup>

Disease.	Total school year.	1919				1920				
		Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Janu-ary.	Febru-ary.	March.	April.	May.
Days lost:										
All known diseases.....	14,373	98	356	793	1,176	1,764	4,008	2,528	2,533	1,117
All known diseases (exclusive of influenza).....	11,832	95	356	777	1,122	1,445	2,154	2,305	2,461	1,117
Influenza.....	2,541	3	.....	16	54	319	1,854	223	72	.....
Cases:										
All known diseases.....	2,326	32	77	125	206	361	537	444	378	166
All known diseases (exclusive of influenza).....	2,065	31	77	123	198	317	355	427	371	166
Influenza.....	261	1	.....	2	8	44	182	17	7	.....

<sup>1</sup> Data given here are for only the small part of the total absence from sickness in which the specific disease was reported.

TABLE IX.—*Number of days lost from school on account of sickness of known cause and number of cases of each known disease causing absence among children 6 to 18 years of age, in certain localities in Missouri during 1919-20.*<sup>1</sup>

Disease.	Days lost.			Cases.		
	All ages (6 to 18).	6 to 10 years of age.	11 to 18 years of age.	All ages (6 to 18).	6 to 10 years of age.	11 to 18 years of age.
All known diseases.....	14,373	9,523	4,850	2,326	1,376	950
All known diseases (exclusive of influenza).....	11,832	8,001	3,831	2,065	1,231	834
Influenza.....	2,541	1,522	1,019	261	145	116
Cold.....	3,843	2,273	1,570	1,177	650	527
Measles.....	2,785	2,290	495	251	205	46
Mumps.....	1,512	955	557	213	134	79
Scarlet fever.....	891	659	232	50	40	19
Whooping cough.....	516	506	10	22	21	1
Chicken pox.....	427	333	94	55	43	12
Tonsillitis.....	305	113	192	49	16	33
Toothache.....	275	129	146	126	61	65
Pneumonia.....	269	177	92	14	8	6
Diphtheria.....	96	42	54	6	3	3
Smallpox.....	58	43	15	4	3	1
Other diseases.....	855	481	374	89	47	42

<sup>1</sup> Data given here are for only the small part of the total absence from sickness in which the specific disease was reported.

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